The Bunger Pond

Name: Kim Hurst
Teaching content area(s): 8th grade Science
School: Bunger Middle School
Extern host site: BHWSC

Part I: Overview of Business •Black Hawk Soil & Water Conservation District The Black Hawk Soil and Water Conservation District was formed in July 1945. Five elected commissioners have been working at improving our water quality and preserving our soils for almost 70 years. This is a voluntary science-based program designed to reduce the impact of Nitrogen and Phosphorus on Iowa's water systems.	Part II: Job Specifics •The Soil and Water Conservation Districts partner with the Conservation Districts of Iowa and various state agencies to implement soil conservation systems containing practices that aid in improving both soil health and water quality. Citizens of Black Hawk County have a unique opportunity to show the country that reducing soil and nutrient runoff can be done without regulations. • The role of the BHSWC is to conserve, protect, improve, develop, use and maintain soil, water and related resources for the benefit of future generations in both public and private sectors.
Part III: Introduce the Problem •During heavy rain (1 ½ inches) a pond forms in the north parking lot, which leads to flooding of the parking lot and surrounding ground. This is the lot which the buses unload/load everyday •Can be real or hypothetical •Can be simplified version	Part IV: Background •Students need to apply scientific principles to design a method to mentor and/or minimize human impact on the environment. Students need to understand that we are all parts of a watershed. Students will need to understand storm water conservation practices. •To help students understand this engineering challenge, a variety of activities will be used from our STEM Scopes curriculum, "Changes to Earth's Environment" (MS-ESS3-3)
Part V: Business Solution •"Civil engineers will devise a plan to reduce standing water after rainfall/snowmelt on parking lot.	Part VI: Student Solutions •Students will determine from the percolation test that the soil may need to be altered and which native plants are best suited for this area. Students may also discover they need to change to slope of thier gardens so water will run from parking lot and away from the school.